NC UNIT SPECIFICATIONS

(for Export Standard)

Horizontal Machining Center

FANUC 32i-A

Machine Models ： HC400
HC500

2012. 02

DOOSAN INFRACORE CO., LTD.

1. STANDARD SPECIFICATIONS

1) AXES CONTROL

- Controlled axes	4 (X, Y, Z, B)
- Simultaneously controllable axes	4 axes
	Positioning(G00)/Linear interpolation(G01) : 3 axes
	Circular interpolation(G02, G03) : 2 axes
- Backlash compensation	
- Emergency stop / overtravel	
- Follow up	
- Least command increment	0.001mm / 0.0001"
- Least input increment	0.001mm / 0.0001"
- Machine lock	All axes / Z axis
- Mirror image	Reverse axis movement
	(Setting screen and M - function)
- Stored pitch error compensation	Pitch error offset compensation for each axis
- Stored stroke check 1	Overtravel controlled by software

2) INTERPOLATION & FEED FUNCTION

- Positioning	G00	
- Linear interpolation	G01	
- Circular interpolation	G02, G03	
- Dwell	G04	
- Exact stop check	G09, G61(mode)	
- Skip function	G31	
- Reference point return check	G27	
- Reference point return	G28	
- 2nd reference point return	G30	
- Feed per minute	mm / min	
- Rapid traverse override	F0 (fine feed), 25 / 50 / 100	%
- Feedrate override (10% increments)	0 - 200	%
- Jog override (10% increments)	0 - 200	%
- Override cancel	M48 / M49	
- Manual handle feed(1 unit)		
- Manual handle feedrate	0.1/0.01/0.001mm	
- Automatic acceleration/deceleration		
- Helical interpolation		
- AI CONTOUR II	80 block preview	
- Machine condition selection function		
- Thread cutting, synchronous cutting		
- Program restart		
- Automatic corner deceleration (Specify AI Contour control II)		
- Feedrate clamp by circular acceleration		
- Linear ACC/DEC before interpolation (Specify AI Contour control II)		
- Linear ACC/DEC after interpolation		
- Control axis detach		
- Rapid traverse bell-shaped acceleration/deceleration		
- Smooth backlash compensation		

3) SPINDLE & M-CODE FUNCTION
- M- code function   M 3   digits
- Spindle orientation
- Spindle serial output
- Spindle speed command   S5   digits
- Spindle speed override (10% increments)   10 - 150   %
- Spindle output switching
- Retraction for rigid tapping
- Rigid tapping   G84, G74

4) TOOL FUNCTION
- Tool nose radius compensation   G40, G41, G42
- Number of tool offsets   200   ea
- Tool length compensation   G43, G44, G49
- Tool number command   T3   digits
- Tool life management
- Tool offset memory C   H/D code, Geometry / Wear memory
- Tool length measurement

5) PROGRAMMING & EDITING FUNCTION
- Absolute / Incremental programming   G90 / G91
- Auto. Coordinate system setting
- Background editing
- Canned cycle   G73, G74, G76, G80 - G89, G99
- Circular interpolation by radius programming
- Plane selection   G17, G18, G19
- Custom macro B
- Custom software size 1MB
- Extended P-code Variables size 512kb
- Addition of custom macro common variables   #100 - #199, #500 - #999
- Decimal point input
- Reader/puncher interface   RS - 232C
- Inch / metric conversion   G20 / G21
- Label skip
- Local / Machine coordinate system   G52 / G53
- Maximum commandable value   ±99999.999mm   (±9999.9999 inch)
- Part program storage size 256kb(640m)   256   kb
- No. of Registered programs   500   ea
- Optional block skip 1
- Optional stop   M01
- Program file name   32 characters
- Sequence number   N 8-digit
- Program protect
- Program stop / end   M00 / M02,M30
- Programmable data input   Tool offset and work offset are entered by G10, G11
- Sub program call   Up to 10 nesting
- Tape code   ISO / EIA   Automatic discrimination
- Work coordinate system   G54 - G59
- Additional work coordinate system(48 Pairs)   G54.1 P1 - 48   pairs
- Coordinate system rotation   G68, G69
- Extended part program editing
- Optional chamfering corner R
- Macro executor

6) OTHERS FUNCTIONS (Operation, Setting & Display, etc)

- Alarm display
- Alarm history display
- Actual cutting speed display
- Clock function
- Cycle start / Feed hold
- Display of PMC alarm message   Message display when PMC alarm occurred
- Dry run
- Ethernet function(Embeded)
- Graphic display   Tool path drawing
- Help function
- Loadmeter display
- DISPLAY/MDI unit   10.4" color LCD / Keyboard for data input, soft-keys
- Memory card interface
- Operation functions   Tape / Memory / MDI / Manual
- Operation history display
- DNC operation with memory card
- Program restart
- Run hour and part number display
- Search function   Sequence NO. / Program NO.
- Self - diagnostic function
- Servo setting screen
- Single block
- External data input
- Multi language display

2. OPTIONAL SPECIFICATIONS

- 3-dimensional coordinate conversion
- Addition of tool pairs for tool life management   1024   pairs
- Additional controlled axes   max. 6 axes per path
- Automatic corner override   G62
- Chopping function   G81.1
- Cylindrical interpolation   G07.1
- Data server
- Dynamic graphic display   Machining profile drawing
  => When the EZ Guide i is used, the Dynamic graphic display cannot application
- Interpolation type pitch error compensation
- EZ Guide i (Doosan infracore Conversational Programming Solution)
- Tape format for FS15
- Increment system 1/10
- Figure copying   G72.1, G72.2
- Manual handle feed 2/3 unit
- Handle interruption
- High speed skip function
- Machining time stamp function
- No. of Registered programs   1000   ea
- Number of tool offsets   400   ea
- Optional block skip addition   2~9   blocks
- Part program storage   512kb(1280m)   kbyte
  (Max.2Mbyte)   1MB(2560m)   mbyte
- Playback function
- Polar coordinate command   G15 / G16
- Polar coordinate interpolation   G12.1 / G13.1
- Programmable mirror image   G50.1 / G51.1
- Remote buffer
- Scaling   G50, G51
- Single direction positioning   G60
- 3rd / 4th reference return
- Stored stroke check 2 / 3
- Tool load monitoring function(Doosan)
- Doosan tool management package Ⅰ
- Tool offset   G45 - G48
- Position switch
- Optional angle chamfering / corner R

*) Prior consultation is required.